

## ACCESSIBILITY CORRECTION LIST

***[2010 ADA Standards for Accessibility Design, 2006 International Building Code, 2006 International Fire Code, and 2006 NFPA 101 Life Safety Code] NFPA 101 references listed below apply only to occupancies/buildings identified in [Rule 0780-02-02-.01\(1\)\(c\)](#)***

**Plans have been reviewed for compliance with the following:**

- a. International Building Code (excluding Chapters 11 and 27), 2006 edition.
- b. International Fire Code, 2006 edition.
- c. International Mechanical Code, 2006 edition.
- d. NFPA 70, National Electrical Code, 2008 edition.
- e. For public buildings: Tennessee Public Building Accessibility Act, 2010 ADA Standards For Accessible Design.
- f. NFPA 101, Life Safety Code, 2006 edition.

[ a.,b.,c.,f. [Rule 0780-02-02-.01](#) ] [ d. [Rule 0780-02-01-.02](#) ] [ e. [T.C.A 68-120-204](#) ]

Correction lists are not all inclusive. See additional comments on the cover sheet.

**Please Note:** Items listed require correction by revised plans, addenda, field orders, or change orders before plans are approved for construction. Answers in letter form are *not* acceptable. **Starting construction before plans approval may be considered as just cause by the State to issue a stop work order.** [ [Rule 0780-02-03-.02\(1\)](#) ]

**NOTE: CHAPTER 11 OF THE IBC HAS NOT BEEN ADOPTED BY THE STATE OF TENNESSEE FOR ACCESSIBILITY. CHAPTER 11 REFERENCES IN THE BODY OF THE IBC CANNOT BE APPLIED.**

### Egress

1. Areas accessible to people with severe mobility impairments other than existing buildings shall not have less than two accessible means of egress. [NFPA 101 7.5.4.1 and IBC 1007.1] One accessible means of egress will be permitted where a single means of egress is permitted for the general occupancy load. [NFPA 101 7.5.4.1.2, IBC T 1004.1.1 and 2010 Standards Advisory 105.2.4 ICC/IBC.]
2. Each required means of egress must be continuous and accessible through to the public way including sidewalks, ramps, exit stairs, horizontal exits, etc. [NFPA 101 7.5.4.3 and IBC 1007.2]
3. On the level of exit discharge, all means of egress provided shall be accessible through to the public way including sidewalks, ramps, exit stairs, horizontal exits, etc. [NFPA 101 7.5.4.3, IBC 1007.2, and 2010 Standards 402.2]
4. When accessible exits are required to be placed  $\frac{1}{2}$  the diagonal dimension apart by NFPA 101 7.5.4.2 and/or IBC 1015.2, separation must be provided to reduce the possibility that both can be blocked by a single fire or emergency event. [NFPA 101 7.5.4.3.2 and IBC 1004.1.4]
5. At least one accessible exit or area of refuge must exist within the travel distance providing an accessible route to an exit discharge. [NFPA 101 7.5.4.1.1]

6. Egress cannot be through intervening spaces unless the space is singular, accessory to, has a discernable path through, and is not high hazard. [NFPA 101 7.1.10.2.2 and IBC 1014.2(1)]
7. Egress cannot be through any hazardous location such as kitchens, storage rooms, closets, mechanical rooms. [NFPA 101 7.5.2.1 and IBC 1014.2(2)]

**Accessible Means of Egress / Area of Refuge**

1. If an exit from a level which can be occupied above or below the level of exit discharge is inaccessible, then Accessible Means of Egress shall be provided on each such level equal to the number of required inaccessible exits. [NFPA 101 7.5.4.1.1, IBC 1007.1 and 2010 Standards 207.1 Advisory 105.2.4 ICC/IBC.]
2. A compliant horizontal exit may serve as an area of rescue assistance / area of refuge shall discharge to an area of refuge in accordance with IBC 1021 [NFPA 101 7.5.4.6, IBC 1007.2(6) and 2010 Standards 207.1 Advisory 105.2.4 ICC/IBC]
3. An area of refuge shall be all of the following:
  - A. A smoke-tight and rated area or room which provides direct access to an exit from within the room or area shall be provided. If the room or area leads into an exit enclosure which is required to have a fire resistance rating greater than one hour, then the construction of the room or area serving as an area of rescue assistance / area of refuge, including the rating for the door, shall have the same fire resistance rating as that required for the exit enclosure. [IBC 1007.6 and 2010 Standards 207.1 Advisory 105.2.4 ICC/IBC]
  - B. An area of refuge shall be sized to accommodate at least one wheelchair space 30" x 48" per ever 200 occupants and portion thereof. [IBC 1007.6.1 and 2010 Standards 207.1 Advisory 105.2.4 ICC/IBC]
  - C. An area of refuge shall be separated by a smoke proof barrier in accordance with section 709 or a horizontal exits complying with section 1021. [IBC 1007.6.2 and 2010 Standards 207.1 Advisory 105.2.4 ICC/IBC]
4. An area of refuge is not required in fully sprinkled buildings when the building is sprinkled by an approved automatic system. The sprinkler system substitution for area of rescue assistance is not applicable for any floor on the level of exit discharge. [NFPA 101 7.5.4.2.2, 2010 Standards 207.1 Advisory 105.2.4 ICC/IBC]
5. An area of refuge must be signed saying "AREA OF RESCUE ASSISTANCE" with Braille. Directional signs must also be provided. [IFC 1007.6.5, NFPA 101 7.2.12.3.5.1, IBC 1007.7, 2010 Standards 216.4.2, and 207.1 Advisory 105.2.4 ICC/IBC]
6. Area of refuge signs must be illuminated as exit signs. [IFC 1007.6.5, NFPA 101, 7.2.12.3.5.2, and 2010 Standards 207.1 Advisory 105.2.4 ICC/IBC]

7. An area of refuge must be provided with 2-way communications that communicates with the main building entrance, the entrance used by the majority of the occupants or other pre-approved location by the authority having jurisdiction. An area of refuge must be provided with 2-way communications must have back-up independent power. [NFPA 72 4.4.1.5, IFC 1007.6.3, NFPA 101 7.2.12.2.5, IBC 1007.6.3, IBC 1007.6.4 and 2010 Standards 207.1 Advisory 105.2.4 ICC/IBC]
8. An area of rescue assistance's 2-way communications must be provided with operating instructions and not require any tight grasp or grip to operate. [IFC 1007.6.4, and 2010 Standards 207.1 Advisory 105.2.4 ICC/IBC]

#### Site Access

1. Existing buildings other than change of occupancy shall have no less than one accessible route. [2010 Standards 206.2.1]
2. The main entrance of the building must be accessible unless it meets one of the exceptions below in A or B. [2010 Standards 202.5 and Advisory 202.5 Alterations to Qualified Historic Buildings and Facilities Exception.]
  - A. Historical building currently on the National Register of Historical Places for the State of Tennessee and where making the entrance accessible will threaten or destroy the historical significance of the building. A list of places by Tennessee County may be available online at <http://www.nationalregisterofhistoricplaces.com/tn/state.html>.

The specific building must be expressly listed on the registry and the designer must include a statement which identifies what distinctive characteristic(s) of the building which will be threatened or destroyed by making the route accessible. This information must be presented directly in the plans required by [Rule 0780-02-03-.02](#) which are submitted and sealed by the designer of record. [Office Policy]
  - B. Historical building currently recognized by the Tennessee Historical Commission as historical and where making the entrance accessible will threaten or destroy the historical significance of the building. The site must be on the list of State Owned Historical Places and a letter by the THC declaring the specific building historical which states the distinctive characteristic(s) of the building which will be threatened or destroyed by making the route accessible. This letter must be attached directly in the plans required by [Rule 0780-02-03-.02](#) which are submitted and sealed by the designer of record. [Office Policy]
3. Accessible routes shall coincide with or be located in the same area as general circulation paths. Where circulation paths are interior, required accessible routes shall also be interior. [2010 Standards 206.3]
4. At least 60 percent of all *public entrances* shall comply with 404 of the 2010 Standards. [2010 Standards 206.4.1]
5. The slope of a walk may not exceed 1 in 20 feet. If handrails are provided, the slope may be 1 in 12 feet. The walk must not have a cross slope greater than 1 in 48. [2010 Standards 403.3, 405.2 and 405.3]

6. Provide accessible parking space(s) whether in a garage or in a lot/lots. See Table 208.2. [2010 Standards 208.2 and Advisory 208.2]

Table 208.2 Parking Spaces

Total Number of Parking Spaces Provided in Parking Facility	Minimum Number of Required Accessible Parking Spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1000	2 percent of total
1001 and over	20, plus 1 for each 100, or fraction thereof, over 1000

7. Car parking spaces shall be 96 inches wide minimum and van parking spaces shall be 132 inches wide minimum, shall be marked to define the width, and shall have an adjacent Access aisle complying with 502.3 (#8 below).

EXCEPTION: Van parking spaces shall be permitted to be 96 inches wide minimum where the access aisle is 96 inches wide minimum. [2010 Standards 502.2, and Exception]

8. Access aisles serving parking spaces shall comply with 502.3. Access aisles shall adjoin an *accessible* route. Two parking spaces shall be permitted to share a common access aisle. Access aisles serving car and van parking spaces shall be 60 inches minimum. [2010 Standards Advisory 502.3, 502.3]
9. Access aisles serving car and van parking spaces shall be 60 inches minimum. Access aisles shall extend the full length of the parking spaces they serve and adjoin an *accessible* route. Access aisles shall be marked so as to discourage parking in them. [2010 Standards Advisory 502.3, 502.3.1, 502.3.2 and 502.3.3]
10. Except as provided for **Clear Width at a Turn** and **Passing Spaces**, the clear width of walking surfaces shall be 36 inches minimum.

EXCEPTION: The clear width shall be permitted to be reduced to 32 inches minimum for a length of 24 inches (610 mm) maximum provided that reduced width segments are separated by segments that are 48 inches long minimum and 36 inches wide minimum. [2010 Standards 403.5.1]

11. Where the *accessible* route makes a 180 degree turn around an *element* which is less than 48 inches wide, clear width shall be 42 inches minimum approaching the turn, 48 inches minimum at the turn and 42 inches minimum leaving the turn.

EXCEPTION: Where the clear width at the turn is 60 inches minimum compliance with this requirement shall not be required. [2010 Standards 403.5.2]

12. An *accessible* route with a clear width less than 60 inches will provide passing *spaces* at intervals of 200 feet maximum. Passing *spaces* *will* be either: a *space* 60" x 60" min.; or, an intersection of two walking surfaces providing a T-shaped *space* complying with 304.3.2 where the base and arms of the T-shaped *space* extend 48 inches minimum beyond the intersection. [2010 Standards 403.5.3]
13. If handrails are provided along walking surfaces with *running slopes* not steeper than 1:20 they shall comply with the requirements for handrails (required for slopes greater than 1:20 – see ramp requirements). [2010 Standards 403.6]
14. At least one *accessible* route shall connect *accessible buildings*, *accessible facilities*, *accessible elements*, and *accessible spaces* that are on the same *site*.

EXCEPTION: An *accessible* route shall not be required between *accessible buildings*, *accessible facilities*, *accessible elements*, and *accessible spaces* if the only means of access between them is a *vehicular way* not providing pedestrian access. [2010 Standards 206.2.2]

### Ramps

1. The maximum slope of a ramp may not exceed 1:12. The EXCEPTION to 2010 Standards 405.2 cannot be applied due to the more restrictive requirement in the IBC. [IBC 1010.2 and 2010 Standards 405.2]
2. *Cross slope* of *ramp* runs shall not be steeper than 1:48. [2010 Standards 405.3]
3. Ramps may not rise more than 30 inches without an intermediate landing. [2010 Standards 405.6]
4. Exterior ramps must have a minimum clear width (handrail to handrail) of 48". The minimum clear width of any *ramp* run and, where handrails are provided, the clear width between handrails shall be 36" min. Ramps used for egress must be at least as wide as required for corridors.

EXCEPTION: Within *employee work areas*, the required clear width of *ramps* that are a part of *common use circulation paths* shall be permitted to be decreased by *work area equipment* provided that the decrease is essential to the function of the work being performed. [IBC 1010.5 and 2010 Standards 405.5]

5. Landings at top and bottom of ramps must be as wide as the ramp by 60 inches. [IBC 1010.6.3 and 2010 Standards 405.7, 405.7.3]
6. Ramps at changes of directions must be a minimum of 60" by 60". [IBC 1010.6.4 and 2010 Standards 405.7.4]
7. Ramp must have handrails along both sides of a ramp with a rise in excess of 6 inches. [NFPA 101 7.2.5.4, IBC 1010.8 and 2010 Standards 405.8]
8. Edge protection complying with **Extended Floor or Ground Surface** or **Curb or Barrier** shall be provided on each side of *ramp* runs and at each side of *ramp* landings unless one of the exceptions are met. [IBC 1010.9.1, 1010.9.2 and 2010 Standards 405.9]

### EXCEPTIONS:

1. Edge protection shall not be required on *ramps* that are not required to have handrails and the ramps have sides (i.e. curb ramps).
2. Edge protection shall not be required on the sides of *ramp* landings serving an adjoining *ramp* run or stairway.
3. Edge protection shall not be required on the sides of *ramp* landings having a vertical drop-off of ½" max. within 10" horizontally of the min. the landing.

## Curb Ramps and Islands

1. Counter slopes of adjoining gutters and road surfaces immediately adjacent to the *curb ramp* shall not be steeper than 1:20. The adjacent surfaces at transitions at *curb ramps* to *walks*, gutters, and streets shall be at the same level. [2010 Standards 406.2]
2. Where provided, *curb ramp* flares shall not be steeper than 1:10. [2010 Standards 406.3]
3. Landings shall be provided at the tops of *curb ramps*. The landing clear length shall be 36 inches (915 mm) minimum. The landing clear width shall be at least as wide as the *curb ramp*, excluding flared sides, leading to the landing.

EXCEPTION: In *alterations*, where there is no landing at the top of *curb ramps*, *curb ramp* flares shall be provided and shall not be steeper than 1:12. [IBC 1010.6.5 and 2010 Standards 406.4]

4. *Curb ramps* and the flared sides of *curb ramps* shall be located so that they **do not project into** vehicular traffic lanes, parking *spaces*, or parking access aisles. *Curb ramps* at *marked crossings* shall be wholly contained within the markings, excluding any flared sides. [2010 Standards 406.5]
5. Diagonal or corner type *curb ramps* with returned curbs or other well-defined edges shall have the edges parallel to the direction of pedestrian flow. The bottom of diagonal *curb ramps* shall have a clear *space* 48" minimum outside active traffic lanes of the roadway. Diagonal *curb ramps* provided at *marked crossings* shall provide the 48" minimum clear *space* within the markings. Diagonal *curb ramps* with flared sides shall have a segment of curb 24" long minimum located on each side of the *curb ramp* and within the *marked crossing*. [2010 Standards 406.6]
6. Raised islands in crossings shall be cut through level with the street or have *curb ramps* at both sides. Each *curb ramp* shall have a level area 48" x 36" min. at the top of the *curb ramp* in the part of the island intersected by the crossings. Each 48" x 36" min. area shall be oriented so that the 48" min. length is in the direction of the *running slope* of the *curb ramp* it serves. The 48" by 36" min. areas and the *accessible* route shall be permitted to overlap. [2010 Standards 406.7]
7. Revolving doors, revolving gates, and turnstiles shall not be part of an *accessible* route. [2010 Standards 404.3.7]
8. Where a *circulation path* directly connects a performance area (i.e. stage, platform) to an assembly seating area, an *accessible* route shall *directly connect* the assembly seating area with the performance area. An *accessible* route shall be provided from performance areas to ancillary areas or *facilities* used by performers unless exempted by 206.2.3 Exceptions 1 through 7 (#1 above). [2010 Standards 206.2.6]
9. In court sports, at least one *accessible* route shall directly connect both sides of the court. [2010 Standards 206.2.12]
10. Exercise machines and equipment required to comply with 236 shall be on an *accessible* route. [2010 Standards 206.2.13]

## Stairs, Escalators and Elevators

1. At least one *accessible* route shall connect each *story* and *mezzanine* in multi-story buildings and facilities. [2010 Standards 206.2.3]



EXCEPTIONS:

1. In **private buildings or facilities (non-public/governmental/ADA Title II)** that are **less than three stories** – or - that has less than 3000 sq-ft per *story*, an *accessible* route shall not be required to connect *stories* provided that the *building* – or - *facility* is not a shopping center, a shopping mall, the professional office of a health care provider, a terminal, depot or other station used for specified public transportation, an airport passenger terminal, or another type of *facility* as determined by the Attorney General.
  2. Where **a two story public building or facility** has one *story* with an *occupant load* of five or fewer persons that **does not contain** *public use space*, that *story* shall not be required to be connected to the *story* above or below.
  3. In **detention and correctional** *facilities*, an *accessible* route shall not be required to connect *stories* where cells with mobility features required to comply with the 2010 Standards 807.2, all *common use* areas serving cells with mobility features required to comply with 807.2, and all *public use* areas are on an *accessible* route.
  4. In **residential facilities**, an *accessible* route shall not be required to connect *stories* where *residential dwelling units* with mobility features required to comply with the 2010 Standards 809.2 through 809.4, all *common use* areas serving *residential dwelling units* with mobility features required to comply with 809.2 through 809.4, and *public use* areas serving *residential dwelling units* are on an *accessible* route.
  5. Within **multi-story transient lodging** guest rooms with mobility features required to comply with 2010 Standards 806.2, an *accessible* route shall not be required to connect *stories* provided that *spaces* complying with 806.2 are on an *accessible* route and sleeping accommodations for two persons minimum are provided on a *story* served by an *accessible* route.
  6. In air traffic control towers, an *accessible* route shall not be required to serve the cab and the floor immediately below the cab.
  7. Where exceptions for **alterations to qualified historic buildings or facilities** are permitted by 2010 Standards 202.5, an *accessible* route shall not be required to *stories* located above or below the *accessible story*.
2. In *alterations* and *additions*, where an escalator or stair is provided where none existed previously and major structural modifications are necessary for the installation, an *accessible* route shall be provided between the levels served by the escalator or stair unless exempted by 2010 Standards 206.2.3 Exceptions 1 through 7 (#1 above). [2010 Standards 206.2.3.1]
  3. Spaces and Elements. At least one *accessible* route shall connect *accessible building* or *facility entrances* with all *accessible spaces* and *elements* within the *building* or *facility* which are otherwise connected by a *circulation path* unless exempted by 2010 Standards 206.2.3 Exceptions 1 through 7. [2010 Standards 206.2.4]

EXCEPTIONS:

1. Raised courtroom stations, including judges' benches, clerks' stations, bailiffs' stations, deputy clerks' stations, and court reporters' stations shall not be required to provide vertical access provided that the required clear floor *space*, maneuvering *space*, and, if appropriate, electrical service are installed at the time of initial construction to allow future installation of a means of vertical access complying with 2010 Standards 405, 407, 408, or 410 without requiring substantial reconstruction of the *space*.
2. In *assembly areas* with fixed seating required to comply with 2010 Standards 221 Assembly Areas, an *accessible* route shall not be required to serve fixed seating where *wheelchair spaces* required to be on an *accessible* route are not provided.
3. *Accessible* routes shall not be required to connect *mezzanines* where *buildings* or *facilities* have no more than one story. In addition, *accessible* routes shall not be required to connect *stories* or *mezzanines* where multi-story *buildings* or *facilities* are exempted by 2010 Standards 206.2.3 Exceptions 1 through 7 (#1 above).

4. Treads and Risers. All steps on a flight of stairs shall have uniform riser heights and uniform tread depths. Risers shall be 4" high minimum and 7" high maximum. Treads shall be 11" deep minimum. [IBC 1009.3 and 2010 Standards 504.2]
5. Open Risers. Open risers are not permitted. [2010 Standards 504.3]
6. Tread Surface. Stair treads shall be stable, firm, and slip resistant. Changes in level are not permitted.  
  
EXCEPTION: Treads shall be permitted to have a slope not steeper than 1:48. [2010 Standards 504.4]
7. Nosings. The radius of curvature at the leading edge of the tread shall be ½" max. Nosings that project beyond risers shall have the underside of the leading edge curved or beveled. Risers shall be permitted to slope under the tread at an angle of 30 degrees maximum from vertical. The permitted projection of the nosing shall extend 1½" max. over the tread below. [NFPA 101 7.2.2.3.5 and 2010 Standards 504.5]

### Doors, Doorways, and Gates

1. Door openings shall provide a clear width of 32" minimum. Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees. Openings more than 24" deep shall provide a clear opening of 36" minimum. There shall be no projections into the required clear opening width lower than 34" above the finish floor or ground. Projections into the clear opening width between 34" and 80" above the finish floor or ground shall not exceed 4 inches

#### EXCEPTIONS:

1. In *alterations*, a projection of 5/8 inch maximum into the required clear width shall be permitted for the latch side stop.
  2. Door closers and door stops shall be permitted to be 78" minimum above the finish floor or ground. [NFPA 101 7.2.1.2.4, IBC 1008.1.1, 2010 Standards 404.2.3]
2. Handles, pulls, latches, locks, and other *operable parts* on doors and gates shall comply with 309.4. *Operable parts* of such hardware shall be 34" minimum and 48" maximum above the finish floor or ground. Where sliding doors are in the fully open position, operating hardware shall be exposed and usable from both sides.

#### EXCEPTIONS:

1. Existing locks shall be permitted in any location at existing glazed doors without stiles, existing overhead rolling doors or grilles, and similar existing doors or grilles that are designed with locks that are activated only at the top or bottom rail.
  2. Access gates in barrier walls and fences protecting pools, spas, and hot tubs shall be permitted to have *operable parts* of the release of latch on self-latching devices at 54" maximum above the finish floor or ground provided the self-latching devices are not also self-locking devices and operated by means of a key, electronic opener, or integral combination lock. [2010 Standards 404.2.7]
3. Door closers and gate closers shall be adjusted so that from an open position of 90 degrees, the time required to move the door to a position of 12 degrees from the latch is 5 seconds minimum. [2010 Standards 404.2.8.1]
  4. Door and gate spring hinges shall be adjusted so that from the open position of 70 degrees, the door or gate shall move to the closed position in 1.5 seconds minimum. [2010 Standards 404.2.8.2]
  5. Swinging door and gate surfaces within 10" of the finish floor or ground measured vertically shall have a smooth surface on the push side extending the full width of the door or gate. Parts creating horizontal or vertical joints in these surfaces shall be within 1/16" of the same plane as the other. Cavities created by added kick plates will be capped. [2010 Standards 404.2.10]



EXCEPTIONS:

1. Sliding doors are exempt.
  2. Tempered glass doors without stiles and having a bottom rail or shoe with the top leading edge tapered at 60 degrees minimum from the horizontal shall not be required to meet the 10" inch bottom smooth surface height requirement.
  3. Doors and gates that do not extend to within 10" of the finish floor or ground are exempt.
  4. Existing doors and gates without smooth surfaces within 10" of the finish floor or ground are exempt provide smooth surfaces provided that if added kick plates are installed, cavities created by such kick plates are capped.
6. Door and Gate Opening Force. Fire doors shall have a minimum opening force allowable by the appropriate *administrative authority*. The force for pushing or pulling open a door or gate other than fire doors shall be as follows: Interior hinged doors and gates / Sliding or folding doors - 5 pounds max. These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door or gate in a closed position. [2010 Standards 404.2.9]
7. Swinging doors and gates shall have maneuvering clearances complying with Table 404.2.4.1. [2010 Standards 404.2.4.1]

Table 404.2.4.1 Maneuvering Clearances at Manual Swinging Doors and Gates

Type of Use		Minimum Maneuvering Clearance	
Approach Direction	Door or Gate Side	Perpendicular to Doorway	Parallel to Doorway (beyond latch side unless noted)
From front	Pull	60 inches (1525 mm)	18 inches (455 mm)
From front	Push	48 inches (1220 mm)	0 inches (0 mm) <sup>1</sup>
From hinge side	Pull	60 inches (1525 mm)	36 inches (915 mm)
From hinge side	Pull	54 inches (1370 mm)	42 inches (1065 mm)
From hinge side	Push	42 inches (1065 mm) <sup>2</sup>	22 inches (560 mm) <sup>3</sup>
From latch side	Pull	48 inches (1220 mm) <sup>4</sup>	24 inches (610 mm)
From latch side	Push	42 inches (1065 mm) <sup>4</sup>	24 inches (610 mm)

1. Add 12 inches (305 mm) if closer and latch are provided.
2. Add 6 inches (150 mm) if closer and latch are provided.
3. Beyond hinge side.
4. Add 6 inches (150 mm) if closer is provided.

8. Doorways without Doors or Gates, Sliding Doors, and Folding Doors. Doorways less than 36" wide without doors or gates, sliding doors, or folding doors shall have maneuvering clearances complying with Table 404.2.4.2. [2010 Standards 404.2.4.2]

Table 404.2.4.2 Maneuvering Clearances at Doorways without Doors or Gates, Manual Sliding Doors, and Manual Folding Doors

Approach Direction	Minimum Maneuvering Clearance	
	Perpendicular to Doorway	Parallel to Doorway (beyond stop/latch side unless noted)
From Front	48 inches (1220 mm)	0 inches (0 mm)
From side <sup>1</sup>	42 inches (1065 mm)	0 inches (0 mm)
From pocket/hinge side	42 inches (1065 mm)	22 inches (560 mm) <sup>2</sup>
From stop/latch side	42 inches (1065 mm)	24 inches (610 mm)

1. Doorway with no door only.

2. Beyond pocket/hinge side.

9. Maneuvering clearances for forward approach shall be provided when any obstruction within 18" of the latch side of a doorway projects more than 8" beyond the face of the door, measured perpendicular to the face of the door or gate. [2010 Standards 404.2.4.3]
10. The distance between two hinged or pivoted doors in series and gates in series shall be 48" minimum plus the width of doors or gates swinging into the space. [2010 Standards 404.2.6]
11. Floor or ground surface within required maneuvering clearances shall be fixed, firm and slip resistant. Changes in level are not permitted.  
  
EXCEPTIONS: 1. Slopes not steeper than 1:48 shall be permitted. 2. Changes in level at thresholds of ½" and existing or *altered* thresholds ¾" high max. that have a beveled edge on each side with a slope not steeper than 1:2 are permitted. [2010 Standards 404.2.4.4]
12. Doors, gates, and side lights adjacent to doors or gates, containing one or more glazing panels that permit viewing through the panels shall have the bottom of at least one glazed panel located 43" maximum above the finish floor.

EXCEPTION: Vision lights with the lowest part more than 66" from the finish floor or ground are exempt. [2010 Standards 404.2.11]

## Floor

1. Floor and ground surfaces shall be stable, firm, and slip resistant.  
  
EXCEPTIONS: 1. Within animal containment areas, floor and ground surfaces shall not be required to be stable, firm, and slip resistant. 2. *Areas of sport activity* shall not be required to be stable, firm, and slip resistant. [2010 Standards 302.1]
2. Carpet or carpet tile shall be securely attached and shall have a firm cushion, pad, or backing or no cushion or pad. Carpet or carpet tile shall have a level loop, textured loop, level cut pile, or level cut/uncut pile texture. Pile height shall be ½" max. Exposed edges of carpet shall be fastened to floor surfaces and shall have trim on the entire length of the exposed edge. Carpet edge trim between ¼" and ½" high shall be beveled with a slope not steeper than 1:2 – or – changes in level of ¼" max. or less may be vertical. [Advisory 302.2 and 2010 standards 302.2]

3. Openings in floor or ground surfaces such as floor grates or drains shall not allow passage of a sphere more than ½" diameter except as specifically allowed. Elongated openings shall be placed so that the long dimension is perpendicular to the dominant direction of travel. [2010 Standards 302.3]

### Turning Space

1. The turning *space* shall be a *space* of 60" diameter minimum. The *space* shall be permitted to include knee and toe clearance. [2010 Standards 304.3.1]
2. The turning *space* shall be a T-shaped *space* within a 60" square minimum with arms and base 36" wide minimum. Each arm of the T shall be clear of obstructions 12" minimum in each direction and the base shall be clear of obstructions 24" minimum. The *space* shall be permitted to include knee and toe clearance only at the end of either the base or one arm. [2010 Standards 304.3.2]

### Toe and Knee Clearance

1. *Space* under an *element* between the finish floor or ground and 9 inches (230 mm) above the finish floor or ground shall be considered toe clearance and shall comply with 306.2. [2010 Standards 306.2.1]
2. Toe clearance shall extend 25 inches (635 mm) maximum under an *element*. [2010 Standards 306.2.2]
3. Where toe clearance is required at an *element* as part of a clear floor *space*, the toe clearance shall extend 17 inches (430 mm) minimum under the *element*. [2010 Standards 306.2.3]
4. *Space* extending greater than 6 inches (150 mm) beyond the available knee clearance at 9 inches (230 mm) above the finish floor or ground shall not be considered toe clearance. [2010 Standards 306.2.4]
5. Toe clearance shall be 30 inches (760 mm) wide minimum. [2010 Standards 306.2.5]
6. *Space* under an *element* between 9 inches (230 mm) and 27 inches (685 mm) above the finish floor or ground shall be considered knee clearance and shall comply with 306.3. [2010 Standards 306.3.1]
7. Knee clearance shall extend 25 inches (635 mm) maximum under an *element* at 9 inches (230 mm) above the finish floor or ground. [2010 Standards 306.3.2]
8. Where knee clearance is required under an *element* as part of a clear floor *space*, the knee clearance shall be 11 inches (280 mm) deep minimum at 9 inches (230 mm) above the finish floor or ground, and 8 inches (205 mm) deep minimum at 27 inches (685 mm) above the finish floor or ground. [2010 Standards 306.3.3]
9. Between 9 inches (230 mm) and 27 inches (685 mm) above the finish floor or ground, the knee clearance shall be permitted to reduce at a rate of 1 inch (25 mm) in depth for each 6 inches (150 mm) in height. [2010 Standards 306.3.4]
10. Knee clearance shall be 30 inches (760 mm) wide minimum. [2010 Standards 306.3.5]

### General Grab Bar Requirements

1. Grab bars with circular cross sections shall have an outside diameter of 1¼ inches minimum and 2 inches maximum. [2010 Standards 609.2.1]
2. Grab bars with non-circular cross sections shall have a cross-section dimension of 2 inches maximum and a perimeter dimension of 4 inches minimum and 4.8 inches maximum. [2010 Standards 609.2.2]

3. Allowable stresses shall not be exceeded for materials used when a vertical or horizontal force of 250 pounds (1112 is applied at any point on the grab bar, fastener, mounting device, or supporting structure. [2010 Standards 609.8]
4. The space between the wall and the grab bar shall be 1½". The space between the grab bar and projecting objects below and at the ends shall be 1½" min. The space between the grab bar and projecting objects above shall be 12" min.

EXCEPTION: The space between the grab bars and shower controls, shower fittings, and other grab bars above shall be permitted to be 1½" min. [2010 Standards 609.3]

5. Grab bars shall be installed in a horizontal position, 33" min. and 36" max. above the finish floor measured to the top of the gripping surface, *except that at water closets for children's use* complying with 2010 Standards 604.9, grab bars shall be installed in a horizontal position 18" min and 27" max. above the finish floor measured to the top of the gripping surface so that the smaller framed persons can utilize the grab bars. The height of the lower grab bar on the back wall of a bathtub shall comply with other applicable requirements. [2010 Standards 609.4]
6. Grab bars and any wall or other surfaces adjacent to grab bars shall be free of sharp or abrasive elements and shall have rounded edges. [2010 Standards 609.5]
7. Grab bars shall not rotate within their fittings. [2010 Standards 609.6]
8. Grab bars shall be installed in any manner that provides a gripping surface at the specified locations and that does not obstruct the required clear floor space. [2010 Standards 609.7]

#### Toilets, Toilet Rooms, Stalls and Bathing Facilities

1. Where toilet *facilities* and bathing *facilities* are provided, they will be accessible unless they are expressly excepted. In buildings and facilities which have an exception to providing an accessible route throughout, specifically, -1) private buildings or facilities that are less than three stories or that have less than 3000 sq-ft per story and - 2) two story public buildings or facilities having one story with an *occupant load* of five or fewer persons that does not contain *public use space*; - *if* toilet and bathing facilities are provided, toilet *facilities* and bathing *facilities* *must* be provided on a story connected by an *accessible* route to an *accessible entrance*. [2010 Standards 213.1]
2. On every floor where toilets and bathing rooms are provided they must be accessible in accordance unless expressly excepted by one of the following: [2010 Standards 213.2]

#### EXCEPTIONS:

1. In alterations where it is technically infeasible, altering existing toilet or bathing rooms shall not be required where a single accessible unisex toilet room or bathing is provided and located in the same area and on the same floor as existing inaccessible toilet or bathing rooms.
2. Where exceptions for *alterations to qualified historic buildings or facilities* are permitted by 202.5 of the 2010 Standards, no fewer than one toilet room for each sex complying with 603 or one unisex toilet room complying with 2010 Standards 213.2.1 shall be provided.
3. Where multiple single user portable toilet or bathing units are clustered at a single location, no more than 5 percent of the toilet units and bathing units at each cluster shall be required to be accessible. Accessible portable toilet units and bathing units shall be identified by the International Symbol of Accessibility.

4. Where multiple single user toilet rooms are clustered at a single location, no more than 50 percent of the single user toilet rooms for each use at each cluster shall be required to be accessible.
3. Unisex, toilet and bathing rooms cannot have more than one lavatory, and 1) two water closets without urinals or 2) one water closet and one urinal. Unisex bathing rooms must contain all of the following: 1) one shower or one shower and one bathtub, 2) one lavatory, and 3) one water closet. Doors to unisex toilet rooms and unisex bathing rooms must have privacy latches. [2010 Standards 213.2.1]
4. Where toilet compartments (stalls) are provided, at least one toilet compartment must be an accessible Type 1 (2010 Standards 604.8.1.) In addition to the type 1 compartment, at least one type II (2010 Standards 604.8.2) compartment must be provided where six or more toilet compartments are provided, or where the combination of urinals and water closets totals six or more fixtures. [2010 Standards 213.3.1]
5. Where water closets are provided, the first one provided must be accessible.  
  
EXCEPTION: Water closets and toilet compartments for children's use shall be permitted to comply with the 2010 Standards' 604.9. [2010 Standards 213.3.2 and 604.1 Exception]
6. Where more than one urinal is provided, the first one provided must be accessible. [2010 Standards 213.3.3]
7. Where lavatories are provided, the first one provided must be accessible and cannot be located in a toilet compartment. [2010 Standards 213.3.4]
8. Where mirrors are provided, the first one provided must be accessible. [2010 Standards 213.3.5]
9. Where bathtubs or showers are provided, the first one provided must be accessible or at least one accessible shower shall be provided. [2010 Standards 213.3.6]
10. Where coat hooks or shelves are provided in *toilet rooms without toilet compartments*, or where coat hooks or shelves are provided in *toilet compartments*, at least one coat hook must be located within one of the reach ranges specified in 2010 Standards 308 and at least one shelf must be located 40" min. and 48" max. above the finish floor. Where coat hooks or shelves are provided in *bathing facilities*, at least one coat hook must be located within one of the reach ranges specified in 2010 Standards 308 and at least one shelf must be located 40" min. and 48" max. above the finish floor shall serve fixtures in accessible bathing facilities. [2010 Standards 213.3.7]
11. Either a circular or the T-shaped turning space shall be provided *within* the toilet and bathing rooms. [2010 Standards 603.2.1]
12. Doors *shall not* swing into the clear floor space or clearance required for *any fixture*. Doors shall be permitted to swing into the required turning space. [2010 Standards 603.2.3]

EXCEPTIONS:

1. Doors to a toilet room or bathing room for a *single occupant accessed only through a private office* and not for common use or public use shall be permitted to swing into the clear floor space or clearance provided the swing of the door can be reversed to comply with 603.2.3.
2. Where the toilet room or bathing room is for *individual use* and a clear floor space complying with 305.3 is provided within the room beyond the arc of the door swing, doors shall be permitted to swing into the clear floor space or clearance required for any fixture.

13. Mirrors located above lavatories or countertops shall be installed with the bottom edge of the reflecting surface 40" ax. above the finish floor or ground. When mirrors are not located above lavatories or countertops they must be installed with the bottom edge of the reflecting surface 35" max. above the finish floor. [2010 Standards 603.3]

14. The water closet shall be positioned with a wall or partition to the rear and to one side on which grab bars and accessories can be mounted. The centerline of the water closet shall be 16" to 18" from the side wall or partition for a type I stall or room, except that the water closet shall be 17" to 19" from the side wall or partition in a type II stall (ambulatory accessible toilet compartment specified in 604.8.2). Water closets shall be arranged for a left-hand or right-hand approach. [2010 Standards 604.2]

15. Water closets and toilet compartments shall comply with the requirements for adult accessible fixtures.

EXCEPTION: Water closets and toilet compartments for *children's use* shall be permitted to comply with the 2010 Standards 604.9 Water Closets and Toilet Compartments for Children's Use. [2010 Standards 604.1]

16. Clearance around a water closet shall be 60" min. measured perpendicular from the side wall and 56" min. measured perpendicular from the rear wall. The fixture can overlap this space but the door cannot swing into this area. [2010 Standards 604.3.1, 603.2.3]

17. The required clearance around the water closet shall be permitted to overlap the water closet, associated grab bars, dispensers, sanitary napkin disposal units, coat hooks, shelves, *accessible* routes, clear floor *space* and clearances *required* at other related fixtures, and the turning *space*. No other fixtures such as changing tables, lavatories or obstructions shall be located within the required water closet clearance.

EXCEPTION: In *residential dwelling units*, a lavatory complying with the 2010 Standards 606 shall be permitted on the rear wall 18" min. from the water closet centerline where the clearance at the water closet is 66" min. measured perpendicular from the rear wall. [2010 Standards 604.3.2]

18. The seat height of a water closet must be 17" to 19" measured from the floor to the top of the seat. Seats shall not be sprung to return to a lifted position.

EXCEPTIONS: 1. A water closet in a toilet room for a single occupant accessed only through a *private office* and not for *common use* or *public use* shall not be required to be accessible. 2. In residential dwelling units, the height of water closets shall be permitted to be 15" to 19" above the finish floor measured to the top of the seat. [2010 Standards 604.4]

19. Grab bars for water closets shall comply with The General Grab Bar Requirements. Grab bars shall be provided on the side wall closest to the water closet and on the rear wall. [2010 Standards 604.5]

EXCEPTIONS:

1. Grab bars shall not be required to be installed in a toilet room for a single occupant accessed only through a private office and not for common use or public use provided that reinforcement has been installed in walls and located so as to permit the installation of grab bars.
2. In residential dwelling units, grab bars shall not be required to be installed in toilet or bathrooms provided that reinforcement has been installed in walls and located so as to permit the installation of grab bars.
3. In detention or correction facilities, grab bars shall not be required to be installed in housing or holding cells that are specially designed without protrusions for purposes of suicide prevention.



20. The side wall grab bar shall be 42 inches long minimum, located 12" maximum from the rear wall and extending 54 inches minimum from the rear wall. [2010 Standards 604.5.1]
21. The rear wall grab bar shall be 36 inches long minimum and extend from the centerline of the water closet 12 inches minimum on one side and 24 inches minimum on the other side.

EXCEPTIONS:

1. The rear grab bar shall be permitted to be 24" long minimum, centered on the water closet, where wall space does not permit a length of 36" minimum due to the location of a recessed fixture adjacent to the water closet.
  2. Where an administrative authority requires flush controls for flush valves to be located in a position that conflicts with the location of the rear grab bar, then the rear grab bar shall be permitted to be split or shifted to the open side of the toilet area. [2010 Standards 604.5.2]
22. Flush controls shall be hand operated or automatic. Hand operated flush controls shall be accessible. Flush controls shall be located on the open side of the water closet except in ambulatory *accessible* compartments complying with 604.8.2. [2010 Standards 604.6]
  23. Toilet paper dispensers shall be accessible where required and shall be 7" to 9" front of the water closet measured to the centerline of the dispenser. The outlet of the dispenser shall be 15" to 48" above the floor and shall not be located behind grab bars. Dispensers shall not be of a type that controls delivery or that does not allow continuous paper flow. [2010 Standards 604.7]
  24. Type 1 wheelchair *accessible* stalls/compartments shall be 60" wide min. measured perpendicular to the side wall, and 56" deep min for wall hung water closets and 59" deep min" for floor mounted water closets measured perpendicular to the rear wall. Wheelchair *accessible* compartments for *children's use* shall be 60" wide min. measured perpendicular to the side wall, and 59" deep minimum for wall hung and floor mounted water closets measured perpendicular to the rear wall. [2010 Standards 604.8.1.1]
  25. Toilet compartment doors, including door hardware, shall comply with *Doors, Doorways, and Gates* except that if the approach is to the latch side of the compartment door, clearance between the door side of the compartment and any obstruction shall be 42" min. Doors shall be located in the front partition or in the side wall or partition farthest from the water closet. Where located in the front partition, the door opening shall be 4" max. from the side wall or partition farthest from the water closet. Where located in the side wall or partition, the door opening shall be 4" max. from the front partition. The door shall be self-closing. A door pull complying with 404.2.7 shall be placed on both sides of the door near the latch. Toilet compartment doors shall not swing into the minimum required compartment area. [2010 Standards 604.8.1.2]
  26. The front partition and at least one side partition shall provide a toe clearance of 9" min. above the floor and 6" deep min. beyond the compartment-side face of the partition, exclusive of partition support members. Compartments for *children's use* shall provide a toe clearance of 12" min. above the floor.  
  
EXCEPTION: Toe clearance at the front partition is not required in a compartment greater than 62" deep with a wall-hung water closet or 65" deep with a floor-mounted water closet. Toe clearance at the side partition is not required in a compartment greater than 66" wide. Toe clearance at the front partition is not required in a compartment for *children's use* that is greater than 65" deep. [2010 Standards 604.8.1.4]
  27. Type II Ambulatory *accessible* compartments shall have a depth of 60" min. and a width of 35" min. and 37" max. [2010 Standards 604.8.2.1]
  28. Toilet compartment doors, including door hardware, shall comply with *Doors, Doorways, and Gate*, except that if the approach is to the latch side of the compartment door, clearance between the door side of the compartment and any obstruction shall be 42" min. The door shall be self-closing. A door pull complying with

the exception to *Doors, Doorways, and Gate* shall be placed on both sides of the door near the latch. Toilet compartment doors shall not swing into the minimum required compartment area. [2010 Standards 604.8.2.2]

29. Coat hooks shall be located within one of the reach ranges specified in the 2010 Standards 308. Shelves shall be located 40" to 48" above the floor. [2010 Standards 604.8.3]
30. The requirements in 2010 Standards 604.9 are to be followed where the exception for children's water closets is used. The following table provides additional guidance in applying the specifications for water closets for children according to the age group served and reflects the differences in the size, stature, and reach ranges of children ages 3 to 12. The specifications chosen should correspond to the age of the primary user group. The specifications of one age group should be applied consistently in the installation of a water closet and related elements. [2010 Standards 604.9, Advisory 604.9]

Advisory Specifications for Water Closets Serving Children Ages 3 through 12			
	Ages 3 and 4	Ages 5 through 8	Ages 9 through 12
Water Closet Centerline	12 inches (305 mm)	12 to 15 inches (305 to 380 mm)	15 to 18 inches (380 to 455 mm)
Toilet Seat Height	11 to 12 inches (280 to 305 mm)	12 to 15 inches (305 to 380 mm)	15 to 17 inches (380 to 430 mm)
Grab Bar Height	18 to 20 inches (455 to 510 mm)	20 to 25 inches (510 to 635 mm)	25 to 27 inches (635 to 685 mm)
Dispenser Height	14 inches (355 mm)	14 to 17 inches (355 to 430 mm)	17 to 19 inches (430 to 485 mm)

31. The water closet shall be located with a wall or partition to the rear and to one side. For a room or type I compartment, the centerline of the water closet shall be 12" to 18" from the side wall or partition, except that the water closet shall be 17" to 19" from the side wall or partition in the type II (ambulatory) *accessible* toilet compartment specified for adults. Compartments shall be arranged for left-hand or right-hand approach to the water closet. [2010 Standards 604.9.1]
32. The height of water closets shall be 11" to 17" measured to the top of the seat. Seats shall not be sprung to return to a lifted position. [2010 Standards 604.9.3]
33. Flush controls shall be hand operated or automatic. Hand operated flush controls shall comply with reach range requirements and shall be installed 36" max. above the floor. Flush controls shall be located on the open side of the water closet except in type II (ambulatory) *accessible* compartments complying with those for adults. [2010 Standards 604.9.5]
34. Toilet paper dispensers shall comply with reach range requirements and shall be 7" to 9" in front of the water closet measured to the centerline of the dispenser. The outlet of the dispenser shall be 14" to 19" above the floor. There shall be a clearance of 1½" min. below the grab bar. Dispensers shall not be of a type that controls delivery or that does not allow continuous paper flow. [2010 Standards 604.9.6]
35. Clearance in front of bathtubs shall extend the length of the bathtub and shall be 30" wide min. An accessible lavatory shall be permitted at the control end of the clearance. Where a permanent seat is provided at the head end of the bathtub, the clearance shall extend 12" min. beyond the wall at the head end of the bathtub. [2010 Standards 607.2]

36. A permanent seat at the head end of the bathtub or a removable in-tub seat shall be provided. [2010 Standards 607.3]

37. Grab bars for bathtubs shall comply with general requirements for grab bars.

EXCEPTIONS: 1. Grab bars shall not be required to be installed in a bathtub located in a bathing *facility* for a single occupant accessed only through a private office and not for *common use* or *public use* provided that reinforcement has been installed in walls and located so as to permit the installation of grab bars complying with 2010 Standards 607.4. 2. In *residential dwelling units*, grab bars shall not be required to be installed in bathtubs located in bathing *facilities* provided that reinforcement has been installed in walls and located so as to permit the installation of grab bars complying with general provisions for grab bars.[2010 Standards 607.4]

38. For bathtubs with permanent seats, two grab bars shall be installed on the back wall, one located in a horizontal position, 33" to 36" above the floor measured to the top of the gripping surface, and the other located 8" to 10" above the rim of the bathtub. Each grab bar shall be installed 15" maximum from the head end wall and 12" maximum from the control end wall. [2010 Standards 607.4.1.1]

39. A grab bar 24" long minimum shall be installed on the control end wall at the front edge of the bathtub. [2010 Standards 607.4.1.2]

40. For bathtubs without permanent seats, two grab bars shall be installed on the back wall, one located in a horizontal position, 33" to 36" above the floor measured to the top of the gripping surface above the floor and other located 8" to 10" above the rim of the bathtub. Each grab bar shall be 24" long min. and shall be installed 24" max. from the head end wall and 12" max. from the control end wall. On the control end a grab bar 24" long minimum shall be installed on the control end wall at the front edge of the bathtub. A grab bar 12" long minimum shall be installed on the head end wall at the front edge of the bathtub. [2010 Standards 607.4.2.1, 607.4.2.2, 607.4.2.3]

41. Controls, other than drain stoppers, shall be located on an end wall. Controls shall be between the bathtub rim and grab bar, and between the open side of the bathtub and the centerline of the width of the bathtub. [2010 Standards 607.5]

42. A shower spray unit with a hose 59" long min. that can be used both as a fixed-position shower head and as a hand-held shower shall be provided. The shower spray unit shall have an on/off control with a non-positive shut-off. If an adjustable-height shower head on a vertical bar is used, the bar shall be installed so as not to obstruct the use of grab bars. Bathtub shower spray units shall deliver water that is 120°F (49°C) maximum. [2010 Standards 607.6]

43. Enclosures for bathtubs shall not obstruct controls, faucets, shower and spray units or obstruct transfer from wheelchairs onto bathtub seats or into bathtubs. Enclosures on bathtubs shall not have tracks installed on the rim of the open face of the bathtub. [2010 Standards 607.7]

## Showers

1. Transfer type shower *compartments* shall be 36" by 36" clear inside dimensions measured at the center points of opposing sides and shall have a 36" wide min. entry on the face of the shower compartment. *Clearance* of 36" wide minimum by 48" long minimum measured from the control wall shall be provided. [2010 Standards 608.2.1]
2. Standard roll-in type shower compartments shall be 30" wide min. by 60" deep min. clear inside dimensions measured at center points of opposing sides and shall have a 60" wide minimum entry on the face of the shower compartment. [2010 Standards 608.2.2]

3. A 30" by 60" long minimum clearance shall be provided adjacent to the open face of the shower compartment.

EXCEPTION: A lavatory complying with 606 shall be permitted on one 30" wide minimum side of the clearance provided that it is not on the side of the clearance adjacent to the controls or, where provided, not on the side of the clearance adjacent to the shower seat. [2010 Standards 608.2.2.1]

4. Alternate roll-in type shower compartments shall be 36" wide and 60" deep minimum clear inside dimensions measured at center points of opposing sides. A 36" wide minimum entry shall be provided at one end of the long side of the compartment. [2010 Standards 608.2.3]
5. Where multiple grab bars are used, required horizontal grab bars shall be installed at the same height above the finish floor. [2010 Standards 608.3]

EXCEPTIONS:

1. Grab bars shall not be required to be installed in a shower located in a bathing *facility* for a single occupant accessed only through a private office, and not for *common use* or *public use* provided that reinforcement has been installed in walls and located so as to permit the installation of grab bars for showers.
  2. In *residential dwelling units*, grab bars shall not be required to be installed in showers located in bathing *facilities* provided that reinforcement has been installed in walls and located so as to permit the installation of grab bars for showers.
6. In transfer type compartments, grab bars shall be provided across the control wall and back wall to a point 18" from the control wall. [2010 Standards 608.3.1]
  7. Where a seat is provided in standard roll-in type shower compartments, grab bars shall be provided on the back wall and the side wall opposite the seat. Grab bars shall not be provided above the seat. Where a seat is not provided in standard roll-in type shower compartments, grab bars shall be provided on three walls. Grab bars shall be installed 6" max from adjacent walls. [2010 Standards 608.3.2]
  8. In alternate roll-in type shower compartments, grab bars shall be provided on the back wall and the side wall farthest from the compartment entry. Grab bars shall not be provided above the seat. Grab bars shall be installed 6" max. from adjacent walls. [2010 Standards 608.3.3]
  9. A folding or non-folding seat shall be provided in transfer type shower compartments. A folding seat shall be provided in roll-in type showers required in *transient lodging* guest rooms with mobility features complying with 806.2. Seats shall comply with 2010 Standards 610.

EXCEPTION: In *residential dwelling units*, seats shall not be required in transfer type shower compartments provided that reinforcement has been installed in walls so as to permit the installation of accessible seats. [2010 Standards 608.4]

10. In transfer type shower compartments, the controls, faucets, and shower spray unit shall be installed on the side wall opposite the seat 38" to 48" above the shower floor and shall be located on the control wall 15" max. from the centerline of the seat toward the shower opening. [2010 Standards 608.5.1]
11. In standard roll-in type shower compartments, the controls, faucets, and shower spray unit shall be located above the grab bar, but no higher than 48" above the shower floor. Where a seat is provided, the controls, faucets, and shower spray unit shall be installed on the back wall adjacent to the seat wall and shall be located 27" max. from the seat wall. [2010 Standards 608.5.2]
12. In alternate roll-in type shower compartments, the controls, faucets, and shower spray unit shall be located above the grab bar, but no higher than 48" above the shower floor. Where a seat is provided, the controls, faucets, and shower spray unit shall be located on the side wall adjacent to the seat 27" max. from the side

wall behind the seat or shall be located on the back wall opposite the seat 15" max., left or right, of the centerline of the seat. Where a seat is not provided, the controls, faucets, and shower spray unit shall be installed on the side wall farthest from the compartment entry. [2010 Standards 608.5.3]

13. A shower spray unit with a hose 59" long min. that can be used both as a fixed-position shower head and as a hand-held shower shall be provided. The shower spray unit shall have an on/off control with a non-positive shut-off. If an adjustable-height shower head on a vertical bar is used, the bar shall be installed so as not to obstruct the use of grab bars. Shower spray units shall deliver water that is 120°F (49°C) maximum.

EXCEPTION: A fixed shower head located at 48" max. above the shower finish floor shall be permitted instead of a hand-held spray unit in *facilities* that are not medical care *facilities*, long-term care *facilities*, *transient lodging* guest rooms, or *residential dwelling units*. [2010 Standards 608.6]

14. Thresholds in roll-in type shower compartments shall be ½" high maximum. In transfer type shower compartments, thresholds ½" high maximum shall be beveled, rounded, or vertical.

EXCEPTION: A threshold 2" high maximum shall be permitted in transfer type shower compartments in existing *facilities* where provision of a ½" high threshold would disturb the structural reinforcement of the floor slab. [2010 Standards 608.7]

15. Enclosures for shower compartments shall not obstruct controls, faucets, and shower spray units or obstruct transfer from wheelchairs onto shower seats. [2010 Standards 608.8]

## Elevators

1. An elevator is required for this building by TCA 68-120-204(a)(1) and/or the 2010 Standards subpart D.
2. Elevators shall comply with the 2010 Standards and with ASME A17.1 (incorporated by reference, see "Referenced Standards" in Chapter 1 of the 2010 Standards). They shall be passenger elevators as classified by ASME A17.1. Elevator operation shall be automatic. [2010 Standards 407.1]
3. Elevators and lifts required by the 2010 Standards may not be locked inoperable. They must be readily operational at all times. The ADA and other Federal civil rights laws require that accessible features be maintained in working order so that they are accessible to and usable by those people they are intended to benefit. [2010 Standards Advisory 407.1]
4. Height. Call buttons and keypads shall be located within one of the reach ranges specified in 308, measured to the centerline of the highest operable part.

EXCEPTION: Existing call buttons and existing keypads shall be permitted to be located at 54" maximum above the floor, measured to the centerline of the highest operable part. [2010 Standards 407.2.1.1]

5. Call buttons shall be ¾" minimum in the smallest dimension.

EXCEPTION: Existing elevator call buttons shall not be required to comply with the 2010 Standards. [2010 Standards 407.2.1.2]

6. A clear floor or ground space complying with the approach and reach ranges shall be provided at call controls. [2010 Standards 407.2.1.3]

7. A visible and audible signal shall be provided at each hoistway entrance to indicate which car is answering a call and the car's direction of travel. Where in-car signals are provided, they shall be visible from the floor area adjacent to the hall call buttons.

EXCEPTIONS: 1. Visible and audible signals shall not be required at each destination oriented elevator where a visible and audible signal complying with 407.2.2 is provided indicating the elevator car designation information. 2. In existing elevators, a signal indicating the direction of car travel shall not be required. [2010 Standards 407.2.2.1]

8. Visible signal fixtures shall be centered at 72" minimum above the finish floor or ground. The visible signal *elements* shall be 2-½ inches minimum measured along the vertical centerline of the *element*. Signals shall be visible from the floor area adjacent to the hall call button.

EXCEPTIONS: 1. Destination-oriented elevators shall be permitted to have signals visible from the floor area adjacent to the hoistway entrance. 2. Existing elevators shall not be required to comply with this requirement. [2010 Standards 407.2.2.2]

9. Audible signals shall sound once for the up direction and twice for the down direction, or shall have verbal annunciators that indicate the direction of elevator car travel. Audible signals shall have a frequency of 1500 Hz maximum. Verbal annunciators shall have a frequency of 300 Hz minimum and 3000 Hz maximum. The audible signal and verbal annunciator shall be 10 dB minimum above ambient, but shall not exceed 80 dB, measured at the hall call button.

EXCEPTIONS: 1. Destination-oriented elevators shall not be required to comply with this requirement provided that the audible tone and verbal announcement is the same as those given at the call button or call button keypad. 2. Existing elevators shall not be required to comply with the requirements for frequency and dB range of audible signals. [2010 Standards 407.2.2.3]

10. Floor designations shall be provided on both jambs of elevator hoistway entrances. Floor designations shall be provided in both *tactile characters* and braille. *Tactile characters* shall be 2" high minimum. A *tactile* star shall be provided on both jambs at the main entry level. [2010 Standards 407.2.3.1]

11. Destination-oriented elevators shall provide *tactile* car on both jambs of the hoistway immediately below the floor designation. Car designations shall be provided in both *tactile characters* and braille. *Tactile characters* shall be 2" high minimum. [2010 Standards 407.2.3.2]

12. Elevator doors shall be the horizontal sliding type. Car gates shall be prohibited. [2010 Standards 407.3.1]

13. Elevator hoistway and car doors shall open and close automatically.

EXCEPTION: Existing manually operated hoistway swing doors shall be permitted provided that they comply with the requirements for existing. Car door closing shall not be initiated until the hoistway door is closed. [2010 Standards 407.3.2]

14. Elevator doors shall be provided with a reopening device complying with 407.3.3 that shall stop and reopen a car door and hoistway door automatically if the door becomes obstructed by an object or person.

EXCEPTION: Existing elevators with manually operated doors shall not be required to comply with 407.3.3. [2010 Standards 407.3.3]

15. The device shall be activated by sensing an obstruction passing through the opening at 5" nominal and 29" inches (735 mm) nominal above the finish floor. [2010 Standards 407.3.3.1]



16. The device shall not require physical contact to be activated, although contact is permitted to occur before the door reverses. [2010 Standards 407.3.3.2]
17. Door reopening devices shall remain effective for 20 seconds minimum. [2010 Standards 407.3.3.3]
18. The minimum acceptable time from notification that a car is answering a call or notification of the car assigned at the means for the entry of destination information until the doors of that car start to close shall be calculated from the following equation:  $T = D/(1.5 \text{ ft/s})$  or  $T = D/(455 \text{ mm/s}) = 5$  seconds minimum where T equals the total time in seconds and D equals the distance (in feet or millimeters) from the point in the lobby or corridor 60" directly in front of the farthest call button controlling that car to the centerline of its hoistway door.

EXCEPTIONS: 1. For cars with in-car lanterns, T shall be permitted to begin when the signal is visible from the point 60" directly in front of the farthest hall call button and the audible signal is sounded. 2. Destination-oriented elevators shall not be required to comply with the requirements for 2010 Standards for Door and Signal Timing. [2010 Standards 407.3.4]

19. Elevator doors shall remain fully open in response to a car call *for 3 seconds minimum*. [2010 Standards 407.3.5]
20. The width of elevator doors shall comply with Table 407.4.1.

EXCEPTION: In existing elevators, a power-operated car door complying with 404.2.3 shall be permitted. [2010 Standards 407.3.6]

21. Inside dimensions of elevator cars and clear width of elevator doors shall comply with Table 407.4.1.

EXCEPTION: Existing elevator car configurations that provide a clear floor area of 16 square feet min. and also provide an inside clear depth 54" min. and a clear width 36" min. shall be permitted. [2010 Standards 407.4.1]

Table 407.4.1 Elevator Car Dimensions

Door Location	Minimum Dimensions			
	Door Clear Width	Inside Car, Side to Side	Inside Car, Back Wall to Front Return	Inside Car, Back Wall to Inside Face of Door
Centered	42 inches (1065 mm)	80 inches (2030 mm)	51 inches (1295 mm)	54 inches (1370 mm)
Side (off-centered)	36 inches (915 mm) <sup>1</sup>	68 inches (1725 mm)	51 inches (1295 mm)	54 inches (1370 mm)
Any	36 inches (915 mm) <sup>1</sup>	54 inches (1370 mm)	80 inches (2030 mm)	80 inches (2030 mm)
Any	36 inches (915 mm) <sup>1</sup>	60 inches (1525 mm) <sup>2</sup>	60 inches (1525 mm) <sup>2</sup>	60 inches (1525 mm) <sup>2</sup>

1. A tolerance of minus 5/8 inch (16 mm) is permitted.

2. Other car configurations that provide a turning *space* complying with 304 with the door closed shall be permitted.

22. Each car shall be equipped with a self-leveling feature that will automatically bring and maintain the car at floor landings within a tolerance of ½" under rated loading to zero loading conditions. [2010 Standards 407.4.4]

- 23. The level of illumination at the car controls, platform, car threshold and car landing sill shall be 5 foot candles (54 lux) minimum. [2010 Standards 407.4.5]
- 24. Limited-use/limited-application elevators shall comply with 408 of the 2010 Standards and with ASME A17.1. (incorporated by reference, see “Referenced Standards” in Chapter 1). They shall be passenger elevators as classified by ASME A17.1. Elevator operation shall be automatic. [2010 Standards 408.1]
- 25. Elevator cars shall provide a clear width 42” min. and a clear depth 54” min. Car doors shall be positioned at the narrow ends of cars and shall provide 32”min. clear width.

EXCEPTIONS: 1. Cars that provide a clear width 51” min. shall be permitted to provide a clear depth 51” min. provided that car doors provide a clear opening 36” wide minimum. 2. Existing elevator cars shall be permitted to provide a clear width 36” min. clear depth 54”minimum, and a net clear platform area 15 sq-ft min. [2010 Standards 408.4.1]

- 26. Elevator car leveling shall automatic. [2010 Standards 408.4.4]
- 27. Floor surfaces in elevator cars will comply as those for elevators. . [2010 Standards 408.4.2]
- 28. The platform to hoistway clearance will comply as those for elevators. [2010 Standards 408.4.3]
- 29. Elevator car illumination will comply as those for elevators. . [2010 Standards 407.4.3]
- 30. Elevator car controls will comply as those for elevators. Control panels shall be centered on a side wall. [2010 Standards 408.4.6]
- 31. Designations and indicators of car controls will comply as those for elevators. [2010 Standards 408.4.7]
- 32. Car emergency signaling devices will comply as those for elevators. [2010 Standards 408.4.8]
- 33. General. Platform lifts shall comply with ASME A18.1 (1999 edition or 2003 edition) (incorporated by reference, see “Referenced Standards” in Chapter 1). Platform lifts shall not be attendant-operated and shall provide unassisted entry and exit from the lift. [2010 Standards 410.1]
- 34. Floor surfaces in platform lifts will comply as those for elevators. [2010 Standards 410.2]
- 35. Clear floor space in platform lifts will comply as those for elevators. [2010 Standards 410.3]
- 36. The clearance between the platform sill and the edge of any runway landing shall be 1¼”inch 410.4]
- 37. Controls for platform lifts will comply as those for elevators. [2010 Standards 410.5]
- 38. Platform lifts shall have low-energy power-operated doors or gates complying with 404.3. Doors shall remain open for 20 seconds minimum. End doors and gates shall provide a clear width 32 inches minimum. Side doors and gates shall provide a clear width 42” minimum.

EXCEPTION: Platform lifts serving two landings maximum and having doors or gates on opposite sides shall be permitted to have self-closing manual doors or gates. [2010 Standards 410.6]

## Residential

1. Where *mail boxes* are provided in an interior location, at least 5 percent, but no fewer than one, of each type shall comply with 309. In residential *facilities*, where *mail boxes* are provided for each *residential dwelling unit*, *mail boxes* complying with 309 shall be provided for each *residential dwelling unit* required to provide mobility features complying with the 2010 Standards 809.2 through 809.4. [2010 Standards 228.2]
2. Minimum Number: New Construction. Newly constructed facilities with residential dwelling units shall comply with 233.3.1.

EXCEPTION: Where facilities contain 15 or fewer residential dwelling units, the requirements of 233.3.1.1 and 233.3.1.2 shall apply to the total number of residential dwelling units that are constructed under a single contract, or are developed as a whole, whether or not located on a common site. [2010 Standards 233.3.1]

3. Residential Dwelling Units with Mobility Features. In facilities with residential dwelling units, at least 5 percent, but no fewer than one unit, of the total number of residential dwelling units shall provide mobility features complying with 809.2 through 809.4 and shall be on an accessible route as required by 206. [2010 Standards 233.3.1.1]
4. Residential Dwelling Units with Communication Features. In facilities with residential dwelling units, at least 2 percent, but no fewer than one unit, of the total number of residential dwelling units shall provide communication features complying with 809.5. 233.3.2 Residential Dwelling Units for Sale. Residential dwelling units offered for sale shall provide accessible features to the extent required by regulations issued by Federal agencies under the Americans with Disabilities Act or Section 504 of the Rehabilitation [2010 Standards 233.3.1.2]
5. Where an *addition* to an existing *building* results in an increase in the number of *residential dwelling units*, the requirements of 233.3.1 shall apply only to the *residential dwelling units* that are *added* until the total number of *residential dwelling units* complies with the minimum number required by 233.3.1 of the 2010 Standards. *Residential dwelling units* required to comply with 233.3.1.1 shall be on an *accessible* route as required by 206. [2010 Standards 233.3.3]
6. *Alterations* shall comply with 233.3.4.

EXCEPTION: Where compliance with 809.2, 809.3, or 809.4 is *technically infeasible*, or where it is *technically infeasible* to provide an *accessible* route to a *residential dwelling unit*, the entity shall be permitted to *alter* or construct a comparable *residential dwelling unit* to comply with 809.2 through 809.4 of the 2010 Standards provided that the minimum number of *residential dwelling units* required by 233.3.1.1 and 233.3.1.2, as applicable, is satisfied. [2010 Standards 233.3.4]

7. Where a *building* is vacated for the purposes of *alteration*, and the *altered building* contains more than 15 *residential dwelling units*, at least 5 percent of the *residential dwelling units* shall comply with 809.2 through 809.4 and shall be on an *accessible* route as required by 206. In addition, at least 2 percent of the *residential dwelling units* shall comply with 809.5. [2010 Standards 233.3.4.1]
8. In individual *residential dwelling units*, where a bathroom or a kitchen is substantially *altered*, and at least one other room is *altered*, the requirements of 233.3.1 shall apply to the *altered residential dwelling units* until the total number of *residential dwelling units* complies with the minimum number required by 233.3.1.1 and 233.3.1.2. *Residential dwelling units* required to comply with 233.3.1.1 shall be on an *accessible* route as required by 206.

EXCEPTION: Where *facilities* contain 15 or fewer *residential dwelling units*, the requirements of 233.3.1.1 and 233.3.1.2 shall apply to the total number of *residential dwelling units* that are *altered* under a single contract, or are developed as a whole, whether or not located on a common *site*. [2010 Standards 233.3.4.2]

9. *Residential dwelling units* required to provide mobility features complying with 809.2 through 809.4 and *residential dwelling units* required to provide communication features complying with 809.5 shall be dispersed among the various types of *residential dwelling units* in the *facility* and shall provide choices of *residential dwelling units* comparable to, and integrated with, those available to other residents.

EXCEPTION: Where multi-story *residential dwelling units* are one of the types of *residential dwelling units* provided, one-story *residential dwelling units* shall be permitted as a substitute for multi-story *residential dwelling units* where equivalent *spaces* and amenities are provided in the one-story *residential dwelling unit*. [2010 Standards 233.3.5]

10. Where guest rooms are *altered* or *added*, the requirements of 224 of the 2010 Standards shall apply only to the guest rooms being *altered* or *added* until the number of guest rooms complies with the minimum number required for new construction. [2010 Standards 224.1.1]
11. *Entrances*, doors, and doorways providing user passage into and within guest rooms that are not required to provide mobility features complying with 806.2 shall comply with 404.2.3.

EXCEPTION: Shower and sauna doors in guest rooms that are not required to provide mobility features complying with 806.2 shall not be required to comply with 404.2.3. [2010 Standards 224.1.2]

12. In *transient lodging facilities*, guest rooms with mobility features complying with 806.2 shall be provided in accordance with Table 224.2. [2010 Standards 224.2]

Table 224.2 Guest Rooms with Mobility Features

Total Number of Guest Rooms Provided	Minimum Number of Required Rooms Without Roll-in Showers	Minimum Number of Required Rooms With Roll-in Showers	Total Number of Required Rooms
1 to 25	1	0	1
26 to 50	2	0	2
51 to 75	3	1	4
76 to 100	4	1	5
101 to 150	5	2	7
151 to 200	6	2	8
201 to 300	7	3	10
301 to 400	8	4	12
401 to 500	9	4	13
501 to 1000	2 percent of total	1 percent of total	3 percent of total
1001 and over	20, plus 1 for each 100, or fraction thereof, over 1000	10, plus 1 for each 100, or fraction thereof, over 1000	30, plus 2 for each 100, or fraction thereof, over 1000

13. In guest rooms having more than 25 beds, 5 percent minimum of the beds shall have clear floor *space* complying with 806.2.3 of the 2010 Standards. [2010 Standards 224.3]
14. In *transient lodging facilities*, guest rooms with communication features complying with 806.3 shall be provided in accordance with Table 224.4. [2010 Standards 224.4]

**Table 224.4 Guest Rooms with Communication Features**

Total Number of Guest Rooms Provided	Minimum Number of Required Guest Rooms With Communication Features
2 to 25	2
26 to 50	4
51 to 75	7
76 to 100	9
101 to 150	12

15. Guest rooms required to provide mobility features complying with 806.2 of the 2010 Standards and guest rooms required to provide communication features complying with 806.3 shall be dispersed among the various classes of guest rooms, and shall provide choices of types of guest rooms, number of beds, and other amenities comparable to the choices provided to other guests. Where the minimum number of guest rooms required to comply with 806 is not sufficient to allow for complete dispersion, guest rooms shall be dispersed in the following priority: guest room type, number of beds, and amenities. At least one guest room required to provide mobility features complying with 806.2 shall also provide communication features complying with 806.3. Not more than 10 percent of guest rooms required to provide mobility features complying with 806.2 shall be used to satisfy the minimum number of guest rooms required to provide communication features complying with 806.3. [2010 Standards 224.5]

### Assembly Seating

1. Assembly areas required to be accessible shall ensure that [§ 35.151(g) of Title II and Appendix to § 36.406 (f) of Title III]
  - (1) In stadiums, arenas, and grandstands, wheelchair spaces and companion seats **are dispersed to all levels** that include seating served by an accessible route;
  - (2) Assembly areas that are required to horizontally disperse wheelchair spaces and companion seats by section 221.2.3.1 of the 2010 Standards (p. 79) and have seating encircling, in whole or in part, a field of play or performance area shall disperse wheelchair spaces and companion seats **around that field of play** or performance area;
  - (3) Wheelchair spaces and companion seats are not located on (or obstructed by) temporary platforms or other movable structures, except that when an entire seating section is placed on temporary platforms or other movable structures in an area where fixed seating is not provided, in order to increase seating for an event, wheelchair spaces and companion seats may be placed in that section. When wheelchair spaces and companion seats are not required to accommodate persons eligible for those spaces and seats, individual, removable seats may be placed in those spaces and seats;
  - (4) Stadium-style movie theaters shall locate wheelchair spaces and companion seats on a riser or cross-aisle in the stadium section that satisfies at least one of the following criteria—
    - (i) It is located within the rear 60% of the seats provided in an auditorium; or
    - (ii) It is located within the area of an auditorium in which the vertical viewing angles (as measured to the top of the screen) are from the 40th to the 100th percentile of vertical viewing angles for all seats as ranked from the seats in the first row (1st percentile) to seats in the back row (100th percentile).

2. In restaurants and cafeterias, an *accessible* route shall be provided to all dining areas, including raised or sunken dining areas, and outdoor dining areas. [2010 Standards 206.2.5]

EXCEPTIONS:

1. In *buildings or facilities* not required to provide an *accessible* route between *stories*, an *accessible* route shall not be required to a *mezzanine* dining area where the *mezzanine* contains less than 25 percent of the total combined area for seating and dining and where the same decor and services are provided in the *accessible* area.
2. In *alterations*, an *accessible* route shall not be required to existing raised or sunken dining areas, or to all parts of existing outdoor dining areas where the same services and decor are provided in an *accessible space* usable by the public and not restricted to use by people with disabilities.
3. In sports *facilities*, tiered dining areas providing seating required to comply with 221 shall be required to have *accessible* routes serving at least 25 percent of the dining area provided that *accessible* routes serve seating complying with 221 and each tier is provided with the same services.

Advisory 206.2.5 Restaurants and Cafeterias Exception 2. Examples of “same services” include, but are not limited to, bar service, rooms having smoking and non-smoking sections, lotto and other table games, carry-out, and buffet service. Examples of “same decor” include, but are not limited to, seating at or near windows and railings with views, areas designed with a certain theme, party and banquet rooms, and rooms where entertainment is provided.

3. *Wheelchair spaces* complying with 802.1 of the 2010 Standards shall be provided in accordance with Table 221.2.1.1. [2010 Standard 221.2.1.1]

Table 221.2.1.1 Number of Wheelchair Spaces in Assembly Areas

Number of Seats	Minimum Number of Required Wheelchair Spaces
4 to 25	1
26 to 50	2
51 to 150	4
151 to 300	5
301 to 500	6
501 to 5000	6, plus 1 for each 150, or fraction thereof, between 501 through 5000
5001 and over	36, plus 1 for each 200, or fraction thereof, over 5000

4. In each luxury box, club box, and suite within arenas, stadiums, and grandstands, *wheelchair spaces* complying with 802.1 shall be provided in accordance with Table 221.2.1.1. [2010 Standards 221.2.1.2]
5. In boxes other than those required to comply with 221.2.1.2, the total number of *wheelchair spaces* required shall be determined in accordance with Table 221.2.1.1. *Wheelchair spaces* shall be located in not less than 20 percent of all boxes provided. *Wheelchair spaces* shall comply with 802.1. [2010 Standards 221.2.1.3]



6. *Wheelchair spaces* shall be dispersed horizontally. [2010 Standards 221.2.3.1]

EXCEPTIONS:

1. Horizontal dispersion shall not be required in *assembly areas* with 300 or fewer seats if the companion seats required by 221.3 and *wheelchair spaces* are located within the 2nd or 3rd quartile of the total row length. Intermediate aisles shall be included in determining the total row length. If the row length in the 2nd and 3rd quartile of a row is insufficient to accommodate the required number of companion seats and *wheelchair spaces*, the additional companion seats and *wheelchair spaces* shall be permitted to be located in the 1st and 4th quartile of the row.
  2. In row seating, two *wheelchair spaces* shall be permitted to be located side-by-side.
7. Vertical Dispersion. *Wheelchair spaces* shall be dispersed vertically at varying distances from the screen, performance area, or playing field. In addition, *wheelchair spaces* shall be located in each balcony or *mezzanine* that is located on an *accessible* route. [2010 Standards 221.2.3.2]

EXCEPTIONS:

1. Vertical dispersion shall not be required in *assembly areas* with 300 or fewer seats if the *wheelchair spaces* provide viewing angles that are equivalent to, or better than, the average viewing angle provided in the *facility*.
  2. In bleachers, *wheelchair spaces* shall not be required to be provided in rows other than rows at points of entry to bleacher seating.
8. At least one companion seat complying with 802.3 of the 2010 Standards shall be provided for each *wheelchair space* required by 221.2.1. [2010 Standards 221.3]
9. At least 5 percent of the total number of aisle seats provided shall comply with 802.4 and shall be the aisle seats located closest to *accessible* routes.

EXCEPTION: Team or player seating areas serving *areas of sport activity* shall not be required to comply with 221.4 rows at points of entry to bleacher seating. [2010 Standards 221.4]

10. Lawn seating areas and exterior overflow seating areas, where fixed seats are not provided, shall connect to an *accessible* route. [2010 Standards 221.5]
11. While the use of platform lifts is allowed by 206.7.9 of the 2010 Standards, ramps are recommended to provide access to player seating areas serving an area of sport activity. [2010 Standards 206.7.9, Advisory 206.7.9 Team or Player Seating]

### Assistive Listening Systems

1. In each *assembly area* where audible communication is integral to the use of the *space*, an *assistive listening system* shall be provided.

EXCEPTION: Other than in courtrooms, *assistive listening systems* shall not be required where audio amplification is not provided. [2010 Standards 219.2]

2. Receivers complying with 706.2 shall be provided for *assistive listening systems* in each *assembly area* in accordance with Table 219.3. Twenty-five percent minimum of receivers provided, but no fewer than two, shall be hearing-aid compatible. [2010 Standards 219.3]

EXCEPTIONS:

1. Where a *building* contains more than one *assembly area* and the *assembly areas* required to provide *assistive listening systems* are under one management, the total number of required receivers shall be

permitted to be calculated according to the total number of seats in the *assembly areas* in the *building* provided that all receivers are usable with all systems.

- Where all seats in an *assembly area* are served by an induction loop *assistive listening system*, the minimum number of receivers required by Table 219.3 to be hearing-aid compatible shall not be required to be provided.

Table 219.3 Receivers for Assistive Listening Systems

Capacity of Seating in Assembly Area	Minimum Number of Required Receivers	Minimum Number of Required Receivers Required to be Hearing-aid Compatible
50 or less	2	2
51 to 200	2, plus 1 per 25 seats over 50 seats <sup>1</sup>	2
201 to 500	2, plus 1 per 25 seats over 50 seats <sup>1</sup>	1 per 4 receivers <sup>1</sup>
501 to 1000	20, plus 1 per 33 seats over 500 seats <sup>1</sup>	1 per 4 receivers <sup>1</sup>
1001 to 2000	35, plus 1 per 50 seats over 1000 seats <sup>1</sup>	1 per 4 receivers <sup>1</sup>
2001 and over	55 plus 1 per 100 seats over 2000 seats <sup>1</sup>	1 per 4 receivers <sup>1</sup>

1. Or fraction thereof.

### Protruding Objects

- Objects with leading edges more than 27 inches (685 mm) and not more than 80 inches (2030 mm) above the finish floor or ground shall protrude 4 inches (100 mm) maximum horizontally into the *circulation path*.

EXCEPTION: Handrails shall be permitted to protrude 4½ inches (115 mm) maximum. [2010 Standards 307.2]

- Free-standing objects mounted on posts or pylons shall overhang *circulation paths* 12" max. when located 27" min. and 80" max above the finish floor or ground. Where a sign or other obstruction is mounted between posts or pylons and the clear distance between the posts or pylons is greater than 12", the lowest edge of such sign or obstruction shall be 27" max. or 80" min. above the finish floor or ground.

EXCEPTION: The sloping portions of handrails serving stairs and *ramps* shall not be required to comply. [2010 Standards 307.3]

- Vertical clearance shall be 80" high min. Guardrails or other barriers shall be provided where the vertical clearance is less than 80" high. The leading edge of such guardrail or barrier shall be located 27" max. above the finish floor or ground.

EXCEPTION: Door closers and door stops shall be permitted to be 78" min. above the finish floor or ground. [2010 Standards 307.4]

- Protruding objects shall not reduce the clear width required for *accessible* routes. [2010 Standards 307.5]

### Dining Surfaces and Work Surfaces

- Where dining surfaces are provided for the consumption of food or drink, at least 5 percent of the seating *spaces* and standing *spaces* at the dining surfaces shall comply. In addition, where work surfaces are provided for use by other than employees, at least 5 percent shall comply. [2010 Standards 226.1]

EXCEPTIONS:

1. Sales counters and service counters shall not be required to comply.
2. Check writing surfaces provided at check-out aisles not required to comply with 904.3 shall not be required to comply.
2. Dining surfaces and work surfaces required to comply shall be dispersed throughout the *space* or *facility* containing dining surfaces and work surfaces. [2010 Standards 226.2]
3. In facilities covered by the ADA, this requirement does not apply to work surfaces used only by employees. However, the ADA and, where applicable, Section 504 of the Rehabilitation Act of 1973, as amended, provide that employees are entitled to “reasonable accommodations.” With respect to work surfaces, this means that employers may need to procure or adjust work stations such as desks, laboratory and work benches, fume hoods, reception counters, teller windows, study carrels, commercial kitchen counters, and conference tables to accommodate the individual needs of employees with disabilities on an “as needed” basis. Consider work surfaces that are flexible and permit installation at variable heights and clearances. [2010 Standards Advisory 226.1]